Perkins Products Mini Braille Display

User Manual
Version 1.14

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Preface

Thank you for purchasing the Perkins Products Mini Braille Display!

The Perkins Mini is a portable 16 cell Braille display with an integrated Braille keyboard.

Before using the Perkins Mini, please read this user manual.

If you have additional questions about using the Perkins Mini, please contact distributors by e-mail, letter, fax, or telephone.

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1. Getting Started

Welcome to the Perkins Mini, an innovative personal productivity system. The Perkins Mini is a portable 16 cell Braille display with a notetaking feature as well as a suite of additional powerful applications. The Perkins Mini is compatible with several popular screen reading software programs that are used with mobile phones, PC's, and Apple devices via Bluetooth or USB. The Perkins Mini also includes the following applications: Notepad, File Management, Book Reader, Clock and Calculator.

1.1 Equipment Checklist

Carefully unpack your Perkins Mini. Save the box and packing materials for future use. Your Perkins Mini package contains the following items:

- The Perkins Mini in its leather carrying case
- Slim strap to attach to the carrying case
- Power adapter (output is 5V/1A)
- USB Cable
- 4G Micro SD card which comes preinstalled in the Perkins Mini
- Bluetooth USB dongle
- USB disk
- Documentation and Drivers on a CD

- User Manual

1.2 Device description

The Perkins Mini total weight is 300g or 0.7 lbs. with dimensions of 6.3 x 3.78 x 0.9 inches.

The Perkins Mini can operate from its internal rechargeable battery or from its AC adapter via USB cable.

The Perkins Mini comes in a leather carrying case. To open the case, lift the flap on the rear edge and fold it back.

Place the Perkins Mini on a flat surface with the Braille display facing you.

On the left side, you'll find from back to front:

- A vertical USB slot which is for the USB disk
- A horizontal slot for the Micro SD card. The Micro SD card is already inside the Mini. Plugging/unplugging the Micro SD card should be done gently. The Micro SD card slot has an auto-locking feature - just press, and then release it in order to unlock the card.
- Do not remove the Micro SD card while the device is working; some files may be open and could be damaged. Before removing the Micro SD card, close any file that is open in Notepad, and switch off the Perkins Mini.

On the right side, from back to front you'll find:

- A mini USB interface
- A rocker switch to power on/off the Perkins Mini. To turn the Perkins Mini on, press the rocker switch

toward you.

On the top surface of the Perkins Mini you'll find:

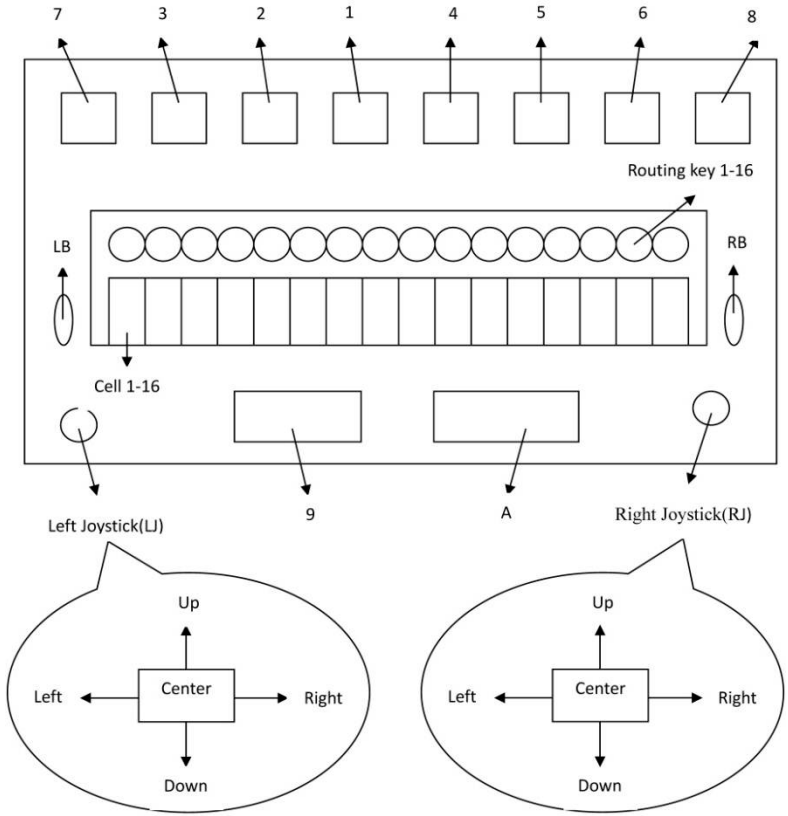
- A 16 cell (8 dot) Braille display.

Behind the braille cells, there is a raised vertical ridge through the middle of each cell. These are the touch cursor buttons. They are especially useful when editing a document. In Notepad, for example, when you press a touch cursor button, the cursor moves to that cell. You can then edit the character displayed on that cell. The touch cursor can also be used to select an item from a menu or list.

Behind the 16 cells, there are 8 Braille keys, named 1 through 8.

In the front of the 16 cells, there are two keys, the left key is 9 (Space), the right key is A (Space).

The Perkins Mini comes with two 5-Navigation joysticks (left, right, up, down and center). In this manual, they will be referred to as "LJ" for the left joystick and "RJ" for the right joystick.
The Perkins Mini has 2 Navigation keys. Near each end of the Braille display is a button. The Left Button (LB) and Right Button (RB).


7
3
2
1
4
5
6
8
Routing key 1-16
LB
RB
Cell 1-16
9
A
Left Joystick(LJ)
Right Joystick(RJ)
Up
Left
Center
Right
Down
Up
Left
Center
Right
Down

1.3 Power Switch and Battery

As you move your hand along the right side of the case towards the rear, you will find a rocker switch surrounded by a concave rectangular frame. To switch the Perkins Mini on, press the rocker switch toward you. The Perkins Mini immediately beeps twice and “notepad” appears on the braille display. This is the first item in the main menu. To turn off the Mini, press the rocker switch away from you.

If you don’t use the Perkins Mini for approximately 1 minute, it will enter sleep mode. Pressing any key will end the sleep mode, but it is recommended that you momentarily press the Joystick left or Joystick right. This will avoid accidentally inserting characters in an open document. If you don’t use the Perkins Mini for approximately 1 hour it will turn off to save power, please note that you CANNOT wake it up by pressing keys. If there was an open document, it will be saved automatically and be given the name “normal” in the root folder. To continue using the Perkins Mini, turn it off, and then immediately turn it back on.

The Perkins Mini can operate from its internal rechargeable battery or from its AC adapter. The length of time you can run the Perkins Mini from a fully charged battery is typically over 10 hours before it becomes flat. Activities like using the USB disk or Bluetooth will increase the drain on the battery.

If the Perkins Mini displays “battery low” and beeps, or does not wake up while turned on, it means that the battery is completely drained; in that case, plug in the AC adapter. The power socket is the mini USB socket, which is located on the right side, behind the power switch. Plug the smaller end of the USB cable into the Perkins Mini, and the larger end

into the USB port on the AC adapter. Plug the AC adapter into a wall outlet. You will hear a beep which indicates the battery is charging. You can also connect the Perkins Mini through a PC via USB cable to charge the battery.

If the battery is flat and the AC adapter is connected, the battery will charge in about 4 hours. Charging takes less time if the battery is only partially discharged. You can charge the battery and use the Perkins Mini simultaneously although the battery may take longer to charge. Please ensure that the battery charges correctly, you can only charge in ambient temperatures between 41 and 95 degrees Fahrenheit, or 5 to 35 degrees Celsius.

1.4 Hardware Specifications

- Memory extension: Micro SD Card and U-disk.
- CPU: ARM
- Battery: Lithium rechargeable battery
- Keyboard: 8-dot Braille keyboard, 4 function keys, 16 cursor routing keys, 2 navigation joysticks
- Braille display: 16 refreshable 8-dot Braille
- Wireless: Bluetooth
- Interface: USB, Mini USB, Micro SD card slot

2. Basic Functions of the Perkins Mini

2.0.1 How to Use the Commands

All of the commands used on the Perkins Mini are comprised of different combinations of the Braille keys. In this user manual, the "+" sign is used to indicate key combinations. For example, "Space + z" indicates that the user should press the space key and letter z braille (dots 1-3-5-6) simultaneously and then release them at the same time. You can execute most commands by pressing the "Enter" button (press Joystick_Center, or press dot 8). If you would like to cancel the execution of any command, or return to the previous status, press "Space + e" (1-5 + Space).

2.0.2 General Functions

Upon switching on the unit, it will beep twice, and the first item in the main menu appears on the braille display: Notepad.

The main menu includes: Notepad, File Management, Read, USB connect, Bluetooth, Clock, Calculator, Tools. Use the Joystick_Up and Joystick_Down to scroll items in the main menu and press Enter or Joystick_Right or cursor routing keys above the item to select it. You can type the first letter to jump to the corresponding item, for example, press the letter "r" (dots 1-2-3-5) to jump to the "read" mode.

Note: As the clock and calculator menu have the same first letter, you can type the letter "a" to jump directly to the calculator.

Several menu items have sub menus, for example: “tools”, will display in braille as (tls) with the sub menu displayed after the punctuation sign >, as follows: tls>power.

tls>power.

Open the sub menu power by pressing Enter or Joystick_Right or the cursor routing keys above the item. For example: press the cursor routing keys above (power). Escape by using Joystick_Left or press Space + e (1-5 + Space) or press the cursor routing keys above the letters (tls) which will return you to the main menu.

Tree views are used to display the structure of folders and files on the Micro SD card. The file name begins with the letter f, and the folder name begins with the letter d. If you press the Enter key or Joystick_Right on the folder, it will display the list of files within the tree view of the folder structure. If you press Enter on the file, it will open the file. If you want to move up one level in the tree view, press the Backspace (7) or Space + e (1-5 + Space) or Joystick_Left.

The Perkins Mini is available in several languages and coordinating braille tables. Switch between different languages and braille tables by pressing Space + l (1-2-3 + Space) in the main menu. Use Joystick_Up and Joystick_Down to scroll between different languages, such as **“language: USA” “Language: en”, “lingua:italiano”, “langue:francaise”**, **“اللغة:عربي”** and press Enter to select it. You can also press Space + e (1-5 + Space) to cancel switching languages and braille tables.

2.1 Notepad

The Notepad application allows you to create and edit simple files; each file size can't exceed 2Mb. Notepad supports long file names and multi-level folders. If the file name is too long to display at one time, you can use Left Button and Right Button to display the whole file name, file size, modification date and time. All file names are displayed and edited using 6-dot braille.

In order to use the Notepad, you will need to have a Micro SD card in the card slot (which is already installed when you receive the Mini). When you start the Notepad application, the Perkins Mini will display the first file name on the Micro SD card, such as "help_en.txt". Use the Joystick_Up and Joystick_Down to scroll the file name and press Enter or Joystick_Right to select it. You can also press backspace or Joystick_Left to move back one level or press Space + e (1-5 + Space) to return to the Notepad main menu. If there isn't a file on the Micro SD card, the Perkins Mini will display "no content". If there is not a Micro SD card, it will display "no SD card". Press Enter key or Space + e (1-5 + Space) to go back to the "Notepad" main menu.

All braille files (brl, brf and so on) are displayed and edited using 6-dot braille. The txt file is displayed and edited using 8-dot Braille. Presss Space + p (1-2-3-4 + Space) to switch between 6-dot and 8-dot braille.

Temporary files will be created on the Micro SD card as you edit your document; if you don't save your document,

these files will be automatically saved. We recommend that you save your document frequently so that these temporary files don't accumulate and slow down your system.

2.1.1 New File (Space + n; 1-3-4-5 + Space)

This command will close any open document and create a new document which you can immediately edit.

2.1.2 Close File (Space + e; 1-5 + Space)

This command will close any open document.

If you have an open document, and you press Space + e (1-5 + Space) to exit the document, you will be prompted to save that document. The Mini will display "save file? y n c" (y will save, n won't save and quit, c will cancel and return you to the currently open file.) You can press Joystick_Left, Joystick_Right to move the cursor to y or n or c and press the Enter key, or you can input the letter y or n or c to complete the command.

2.1.3 Save File (Space + s; 2-3-4 + Space)

This will save the document under its current name; if you have not yet named the document, you will be prompted to do so.

Press Space + s (2-3-4 + Space) to save the file in the current folder, The Perkins Mini will ask you to braille a new file name. After naming the file and pressing Enter, you will be returned to the document you were editing. You can also press Space + e (1-5 + Space) to cancel creating a file name and to continue editing the current file. If you want to save

a new file under a different folder, choose the folder before saving the file. When you open Notepad, press Space + Enter + f (1-2-4 + Space) which will bring you to the list of files and folders in the tree view. Select the folder you want to place the file into and press Enter. Press Space + n (1-3-4-5 + Space) to create a new folder. You can press Space + e (1-5 + Space) to confirm the current name and go back to continue to edit the file.

Note: The file name should not be longer than 8 characters, and the file extension should not be longer than 3 characters. The file name and file extension are separated by a dot. Press backspace to move to an Upper-level within the tree view.

2.1.4 Save As (Space + Enter + s; 2-3-4 + Space + Enter)

This command will save the currently opened document; choose a file name and braille it.

Press Space + Enter + s (2-3-4 + Space + Enter) to save the file in the current folder, The Mini will prompt you to input the new name. After doing this, press Enter; you will return to the current file. You can press Space + e (1-5 + Space) to cancel creating a file name and go back to editing the current file.

If you want to save the file under a different folder, choose the folder before using the “save as” command. Press Space + Enter + f (1-2-4 + Space + Enter) to go to the list of files and folders. Press Space + n (1-3-4-5 + Space) to create a new folder. Press Space + e (1-5 + Space) to continue editing the open file.

Note: The file name should not be longer than 8 characters and the file extension name should not be longer than 3 characters. The file name and file extension are separated by a dot.

2.1.5 Fast Quit (Space + q; 1-2-3-4-5 + Space)

This command closes any open document and returns to the main menu. The document which you do not save will be saved as the file name “normalxx” in the root folder.

2.1.6 Find (Space + f; 1-2-4 + Space)

This command allows you to search backwards or forwards for a letter-sequence, starting from the cursor location. To do this, press Space + f (1-2-4 + Space), then type in the letter-sequence (for example: mini) and press Enter to start a search.

2.1.7 Find Next (Space + x; 1-3-4-6 + Space)

This triggers a search (with the same word you input into the Find command) moving forward to the end of the document.

2.1.8 Find Previous (Space + y; 1-3-4-5-6 + Space). This triggers a search (with the same word you input into the Find command) moving to the beginning of the document.

2.1.9 Set Mark (Space + m; 1-3-4 + Space).

This command marks the position of the cursor in the document. This allows you to return to the same position within a document even after it has been closed and re-opened. The mark position is kept in a hidden file on the Micro SD

card.

2.1.10 Jump to Mark (Space + j; 2-4-5 + Space)

This command will take you to the mark position.

Note: Do not pull out the Micro SD card when you are editing files. If you need to pull out the Micro SD card, please turn the Mini off.

Braille and Hot Key Summary

Action	Hot key	Braille
Space		9, A, 9A
Backspace		7
Enter	Joystick_Center	8
Escape	Space + e	1-5 + Space
Fast exit to main menu	Space + q	1-2-3-4-5 + Space
New file	Space + n	1-3-4-5 + Space
Save file	Space + s	2-3-4 + Space
Save as file	Space + Enter + s	2-3-4 + Enter + Space
Toggle 6/8 dots	Space + p	1-2-3-4 + Space
Display current time	Space + t	2-3-4-5 + Space

Setting current folder	Space + Enter + f	1-2-4 + Enter + Space

Edit Commands:

Action	Hot key	Braille
dot input key		1 through 8
Space		9, A, 9A
Backspace		7
Enter	Joystick_Center	8
Close and exit file	Space + e	1-5 + Space
Delete one character on the right	Space + d	1-4-5 + Space
Find	Space + f	1-2-4 + Space
Find Next word	Space + x, LJ_Up + RJ_Right	1-3-4-6 + Space
Find Previous word	Space + y, LJ_Up + RJ_Left	1-3-4-5-6 + Space
Set Mark	Space + m	1-3-4 + Space
Jump to Mark	Space + j	2-4-5 + Space

Navigation Commands:

Action	Hot key	Braille

Pan Left	LB	
Pan Right	RB	
Page up（Pan left 5 screen）	Space + LJ_Left	1-3 + Space
Page down (Pan right 5 screen)	Space + LJ_Right	4-6 + Space
Move to next word	LJ_Right	5 + Space
Move to previous word	LJ_Left	2 + Space
Cursor goes to beginning of previous sentence	RJ_Up	1 + Space
Cursor goes to beginning of next sentence	RJ_Down	4 + Space
Cursor goes to beginning of current sentence		1-4 + Space
Cursor goes to beginning of previous paragraph	LJ_Up	2-3 + Space
Cursor goes to beginning of next paragraph	LJ_Down	5-6 + Space
Cursor goes to beginning of current paragraph		2-3-5-6 + Space
Cursor goes to beginning of document	Space + LJ_Up	1-2-3 + Space
Cursor goes to end of document	Space + LJ_Down	4-5-6 + Space
Cursor goes left	RJ_Left	3 + Space
Cursor goes right	RJ_Right	6 + Space
Cursor goes to corresponding cell	Routing button 1 through 16	

2.2 File Manage

This function enables you to manage the files and folders in the Micro SD card. File Manage includes three sub menus.:

flm>new folder

flm>delete

flm>rename

Press Enter or Joystick_Right in the File Manage menu to go to the sub menus.

2.2.1 New Folder

flm>new folder

This function enables you to browse in the file list and press Space + n (1-3-4-5 + Space) to create a new folder. You can input the new folder name, then press the Enter key to create the new folder, or Space + e (1-5 + Space) to cancel.

Note: The folder name should not be longer than 8 characters.

2.2.2 Delete

flm>delete

This function shows the tree list and enables you delete a file or folder. You can use Joystick_Up and Joystick_Down to scroll through different files, press LB or RB to display the file size, modified time and date. When you press command Space + d (1-4-5 + Space) in a file or folder, the Mini will display “delete?”, press Enter to delete file, press

Space + e (1-5 + Space) to cancel the deletion .

Note: If you want to delete a folder, please first delete all files in this folder.

2.2.3 Rename

flm>rename

Press Space + r (1-2-3-5 + Space), the Mini will prompt you to input the new name for the file or folder. After editing the name, press Enter to save the new file or folder name. If there is the same file or folder name in the current folder, the Mini will display “exists, replace?”, press Enter to replace, press Space + e (1-5 + Space) to cancel renaming the file.

Note: The file and folder name should not be longer than 8 characters. The file extension name should not be longer than 3 characters. The file name and extension are separated by a dot.

fFle Manage Commands:

Action	Hot key	Braille
Create a new folder	Space +n	1-3-4-5 + Space
Delete file or folder	Space + d	1-4-5 + Space
Rename file or folder	Space + r	1-2-3-5 + Space

2.3 Read

The Read function enables you to read the files in the U-Disk or Micro SD card, and the file's size is unlimited. In order to use the Read function, you need to place a Micro SD card in the card slot or a USB disk in the USB slot. The Mini can read the brl, brf, bse, txt files and so on. If the file extension name is txt, the default display setting is 8-dot braille. If the file extension name is brl, brf, bse or others, the default display setting is 6-dot braille. The Perkins Mini supports long file names and multi-level folders. If the file name is too long to display at one time, you can use LB and RB to display the whole file name, file size, modification date and time. When you exit the file, the mark will be added in the current place automatically.

The Read item has two sub menus, SD Card and U-Disk. Select one of these in order to read the files on the Micro SD card or USB disk.

Auto scroll: The auto scroll command scrolls automatically. You can turn the auto scroll feature on by pressing Joystick_Right, and stop the auto scroll by pressing Enter. For faster scrolling, press the Joystick_Right. For slower scrolling, press the Joystick_Left.

Read Commands:

Action	Hot key	Braille

Pan Left	LB	
Pan Right	RB	
Page up（Pan left 15 screen）	Space + LJ_Left	1-3 + Space
Page down（Pan Right 15 screen）	Space + LJ_Right	4-6 + Space
Toggle 6/8 dots	Space + p	1-2-3-4 + Space
Grade 2 Braille Toggle (only for English txt document)	Space + g	1-2-4-5 + Space
Escape	Space + e	1-5 + Space
Begin auto scroll	Joystick_Right	

2.4 USB connect mode

This application will enable you to use your Perkins Mini as a PC input/output interface. You will need to connect the USB cable and to launch the screen reader on the PC or Apple device. The Perkins Mini supports JAWS, Window-Ees, and HAL and VoiceOver.

Once this application starts, the Mini will display “wait connect…”. Then you can start your screen reading software.

2.5 Bluetooth mode

Using this application allows you to use the Bluetooth interface of the Perkins Mini . Once this application is started,

the Mini will display “wait connect...”, two seconds later, it will display “btname>tsm ****”, where **** is the Bluetooth name serial number. This is necessary in case there are several Minis in one room.

When you are asked to input the Perkins Mini Bluetooth pin, enter “0000” to set up the connection.

2.6 Clock

This application displays the time and date. There are five sub menus:

2.6.1 Display Current Time

For example, if the time is 16:20:12, Perkins Mini displays cl>16h20m12s in the 24 hour setting, cl>04h20m12s pm in the 12 hour setting. Press Enter or Space + e (1-5 + Space) to escape.

2.6.2 Display Current Date

For example, if the date is 25.06.2012, Saturday, the Perkins Mini will display cl>sat 25d06m12y. Press Enter or Space + e (1-5 + Space) to escape.

2.6.3 Set Time

cl>set time

Press Enter to begin setting the time by changing the hour, minute, second and am or pm. Press Joystick_Left and Joystick_Right to move the routing cursor. You will need to press Enter to accept the new setting or press Space + e

(1-5 + Space) to cancel the setting.

2.6.4 Set Date

cl>set date

Press Enter to begin setting the date by changing the day, month and year. Press Joystick_Left and Joystick_Right to move the routing cursor. You will need to press Enter to accept the new setting or press Space + e (1-5 + Space) to cancel the setting.

2.6.5 Set hour format

cl>time format

Press Enter to begin time format, the Mini will display “12 24”. You can select the 12 or 24 hour format by pressing Joystick_Left and Joystick_Right to move the routing cursor. You will need to press Enter to accept the new setting or press Space + e (1-5 + Space) to cancel the setting.

The default time format is 12 hour.

2.7 Calculator mode

With the calculator you can perform arithmetical functions such as addition, subtraction, multiplication,division.

Operator	Standard Braille	Braille

Decimal separator	.	4-6
Addition	+	3-4-6
Subtraction	-	3-6
Multiplication	*	1-6
Division	/	3-4
Equal	= or Enter	1-2-3-4-5-6 or Enter (dot 8) or Joystick_Center
Clear	Press Backspace	7 (dot 7)

2.8 Tools mode

The tools application allows access to information concerning your device. Enter Tools by pressing Enter or Joystick_Right.

2.8.1 Power Menu

tls>power

This shows the power source and battery capacity. If your Mini is not charging, it will display “not charged xx%”, when the voltage is too low. Therefore, below 3.65V, the Mini will beep three times per 10 minutes, and it will display “please charge”. When you plug in the adapter, the Perkins Mini will beep twice and display “usb charging xx%”. When the battery is charged fully, the Mini’s alarm will beep three times, and it will display “bat 100%”.

Press Space + e (1-5 + Space) or Enter or Joystick_Left to exit.

2.8.2 Update

tls>update

This feature allows you to update the firmware. You need to download the update file MINI****.BIN onto the USB disk, and plug it into Perkins Mini USB slot. Press Enter, and the Mini will update the firmware. It will take about 8 seconds. After the update is complete, it will beep twice and display “pls restart., Then turn off the Mini and restart.

Note 1: Do not remove the USB disk or turn the power off when updating the firmware or the Perkins Mini firmware will be corrupted.

Note 2: If the update fails, and the Perkins Mini doesn’t restart, don't worry. Keep pressing Space + u (1-3-6 + Space) and turn the power on. When it displays “update”, press Enter , and it will begin the update.

2.8.3 Test

tls>test

This feature allows you to test the Perkins Mini braille cells and keys. There are two sub menus:

ts>braille line

This function will move all the pins in sequence. Press Enter to change the display test mode. Press Space + e (1-5 +

Space) or Joystick_Left to escape.

ts> keyboard

This function will enable you to test each key. When you press any key and release it, the display pins will change and the Perkins Mini will beep once. Press Space + e (1-5 + Space) or Joystick_Left to escape.

2.8.4 About

tls>about

This feature displays the current version of the program, the format is “*.***”, such as “v1.001”. Press Enter or Space + e (1-5 + Space) or Joystick_Left to escape.

2.8.5 Set sleep

tls>set sleep

Press Enter or Joystick_Right to begin the sleep time setting, and the Mini will display “1 minute”. You can select the sleep time by pressing Joystick_Up and Joystick_Down. such as select 5 minutes, then press Enter to accept the new setting or press Space + e (1-5 + Space) or Joystick_Left to cancel setting.

The default sleep time is 1 minute. You can set the sleep time between 1 minute and 59 minutes.

2.8.6 Help

tls>help

This function will show the help document on the Micro SD card. You could use the Read function hot key to read the help document. Press Space + e (1-5 + Space) to escape.

3. Configuring the Bluetooth Connection

This section instructs you how to install and set up Bluetooth on your PC. If there is already Bluetooth built into your computer, please skip section 3.1 and go to section 3.2. If there is no Bluetooth device in your computer, please follow the steps in section 3.1.

3.1 Installing the Bluetooth Dongle Driver

Open the “USB Bluetooth dongle driver” folder on the CD. Run the “setup.exe”.
Install the driver using the default steps. The Bluetooth dongle driver will be installed automatically. A console window appears; it takes several minutes.
Click “finish”, and the Bluetooth dongle driver will be installed successfully.
Find the USB Bluetooth dongle that came with your Mini package and plug it into your computer.

3.2 Setting up the Bluetooth Connection

Bluetooth is a short-range wireless communications technology.
The Perkins Mini with Bluetooth capability can communicate with a device over a distance of about 10 meters (30 feet)

without requiring a USB cable.

In order to use the Perkins Mini through Bluetooth, you need to establish a partnership with a Bluetooth enabled computer. Most laptops have built-in Bluetooth. If there isn't built-in Bluetooth on your computer, you need to plug in an external USB Bluetooth dongle (find it in the Perkins Mini) and install the appropriate drivers on your computer.

Here are instructions for setting up the Bluetooth connection between the Perkins Mini and your computer.

Do not connect the USB cable to the computer (use the USB cable and power adapter for charging the Mini).

Turn on the Perkins Mini and open the Mini Bluetooth following the steps in section 2.5.

Make sure that Bluetooth is enabled on your computer. If you are using an external USB Bluetooth adapter, make sure you've inserted it into your computer.

Double click the Bluetooth icon in the Windows desktop to open Bluetooth Manager, and search for Bluetooth devices. It will take several seconds. When the search is complete, the Braille display Bluetooth name TSM appears in the list of devices.

Select TSM from the list. If the computer doesn't find the Perkins Mini , please make sure you turn on the Mini, and then search again.

In the Bluetooth passcode edit field, type 0000.

After a few seconds, you will receive a message that the Bluetooth device was successfully connected and the outgoing and incoming COM port assignments are displayed. Make a note of the outgoing port number as this is the port the

screen reader will use to communicate with the Perkins Mini .

Now you are ready to configure your screen reader to use the Bluetooth COM port. To configure the COM port in the screen reader, please refer to chapter 4 for Jaws, chapter 5 for Window-Eyes.

4. Using the Perkins Mini with JAWS

4.1 Installing the Seika Patch for JAWS

Open the “Patch for JAWS” folder in the CD. Run the Patch for JAWS according to your Windows operating system. Install the patch by using the default steps. The Patch for JAWS will be installed by the JAWS Utility automatically. A console window appears which will take several minutes.

4.2 Working in JAWS

4.2.1 Configuring JAWS

Start JAWS and select “Braille…” in the “Options” menu.

Assuming that the default Braille display is set to “No display”, tab to the “Add Braille Display” button and press Enter.

In the “Select components” dialog box, there is a list of Braille displays. Select the “Seika” by pressing the space bar. Tab to the “Next” button and press Enter. If you connected the Perkins Mini to your computer by USB cable, select “USB” as the output port.

If you connected the Perkins Mini to a PC using Bluetooth, in the “Set device options” dialog box, select the output

port that corresponds to the COM port number that you made note of in chapter 3.2.Tab to the “Next” button and press enter.

When prompted to set the primary device, select “Seika” in the “Primary device” list.

Tab to the “Finish” button and press Enter.

In the “Braille Basic Settings” dialog box, tab to the “OK” button and press it.

Restart JAWS and the Perkins Mini will now work .

4.2.2 Navigation keys and commands

Action	Keys
Enter	9A
Enter	RJ_Center
Space	A
JAWS Backspace	9
Up Arrow Key	RJ_Up
Down Arrow Key	RJ_Down
Left Arrow Key	RJ_Left
Right Arrow Key	RJ_Right
Braille Pan Right	RB

Braille Pan Left	LB
Stop Speech	9+RB
Braille Moves Active	LJ_Left + RJ_Up
Active Moves Braille	LJ_Left + RJ_Down
Braille Toggle Marking	LJ_Center + RJ_Up
Braille Next Line	LJ_Right
Braille Prior Line	LJ_Left
Start JAWS Task List	LJ_Right + RJ_Up
List Task Tray Icons	LJ_Right + RJ_Dowm
Right Mouse Button	LJ_Right + RJ_Right
Left Mouse Button	LJ_Right + RJ_Left
Left Mouse Button Lock	A+LJ_Right
Route JAWS Cursor To Pc	LJ_Right + RJ_Center
Route PC Cursor To JAWS	LJ_Left + RJ_Center
Braille Bottom	LJ_Down
Braille Top	LJ_Up
Minimize All Apps	9 + LJ_Center
Select A Link	LJ_Down + RJ_Left

Select A Frame	LJ_Up_Up + RJ_Down
Select A Heading	LJ_Up + RJ_Left
Select A Form Field	LJ_Up + RJ_Right
Braille Toggle 8 Dots	A + LB
Bottom Of File	LJ_Up + RJ_Up
Top Of File	LJ_Down + RJ_Down
PC Cursor	RB + LJ_Right
JAWS Cursor	RB + LJ_Left
Braille Toggle Mode	LB + RB
Braille Toggle 8 Pixels Per Space	A + RB
Braille Toggle Characters And Attributes	LJ_Left + RJ_Left
Braille Turn Marking Off	9 + LB
Increase Braille Auto Advance Speed	LB + RJ_Center
Decrease Braille Auto Advance Speed	LB + LJ_Center
JAWS Page Down	LJ_Down + RJ_Center
JAWS Page Up	LJ_Up + RJ_Center
Braille Tab	LJ_Center + RJ_Right
Braille Shift Tab	LJ_Center + RJ_Left

Next Document Window	RB + LJ_Down
Previous Document Window	RB + LJ_Up
Route Braille To Active Cursor	RB + LJ_Center
Braille Select Text	RJ_Center + Routing
Repeat Last Flash Message	LJ_Down + RJ_Up
Braille Auto Advance	LJ_Down + RJ_Right

4.3 Uninstalling the patch for JAWS

Note: If you uninstall the JAWS patch, it will disable the Perkins Mini's ability to work with JAWS and delete all the associated patch files. **You must uninstall this patch first before uninstalling JAWS.**

4.3.1 Uninstalling the old version of the Seika patch for Jaws

Open the "Add or Remove Programs" in the "Control Panel", and select the item: "Seika Braille Display version 3" or "Seika Patch for JAWS V1.x" or "Seika Patch for JAWS V2.x". Uninstall the item step by step. The uninstall will take several minutes. Please restart the computer after the uninstall.

4.3.2 Uninstall the current version of the Seika patch for Jaws

Open the "Add or Remove Programs" in the "Control Panel", and select the item: "Seika Patch for JAWS V2.3". Uninstall the "Seika Patch for JAWS V2.3" step by step. The uninstall will take several minutes. Please restart the

computer after the uninstall finishes.

5. Using the Perkins Mini with Window-Eyes

5.1 Configuring Window-Eyes 7.5.2

Note: We strongly recommend you update Window-Eyes to version 7.5.2 or later.

If you connect the Perkins Mini to your computer using Bluetooth, in the “Set device options” dialog box, select the output port that corresponds to the COM port number that you made note of in chapter 3.
Start Window-Eyes 7.5 and select “Device” in the “Settings” list.
Select “Braille Display” in the “Device” list.
In the “Braille Displays” option, select “Seika”.
In the “Ports” option, if you connect the Perkins Mini to your computer using USB, select the USB connection.
If you connect the Perkins Mini to your computer using Bluetooth, select the Seika COM port number that you made note of in chapter 3.
Tab to the “Activate” button and press Enter.
Select “Keep Changes” button in the “Braille Settings” dialog box, then press Enter.
Tab to “Save Settings” button and press Enter.

5.2 Navigation Keys and Commands

Actions	Keys
Enter	9A
Enter	RJ_Center
Space	A
Backspace	9
Scroll Braille Left	LB
Scroll Braille Right	RB
Next Braille Line	LJ_down
Next Braille Line	RJ_down
Prior Braille Line	LJ_up
Prior Braille Line	RJ_up
Top Line	LJ_Left
Top Line	RJ_Left
Bottom Line	LJ_Right
Bottom Line	RJ_Right

Mouse Bottom Left	LB + RJ_Down
Mouse Bottom Right	RB + LJ_Right
Mouse Top Left	LB + RJ_Up
Mouse Top Right	RB + LJ_Left
To Focus	LB + RB
6/8 Dot Toggle	Space + LB
Untranslate at Cursor	LJ_Center + RJ_Left
Untranslate at Mouse	LJ_Center + RJ_Right
Braille Graphic Mode	LJ_Center + RJ_Down
Scroll Mode Toggle	LJ_Up + RJ_Left
Show Attributes Toggle	LJ_Down + RJ_Center
Grade 2 Braille Toggle	LJ_Center + RJ_Center
Braille Tracking Toggle	LJ_Down + RJ_Down
Spacing Toggle	LJ_Down + RJ_Right
Attributes To Show Rotor	LJ_Up + RJ_Center
Display Individual Attribute Rotor	LJ_Center + RJ_Up
Quick Message Rotor	LJ_Down + RJ_Left

6. Using the Perkins Mini with VoiceOver

6.1 Using VoiceOver on the iPad and iPhone

Do not connect the USB cable with your computer (use the USB cable and power adapter for charging the Mini).

Turn on the Perkins Mini and open the Mini Bluetooth following the steps in section 2.5.

Press the Home key on the iPad or iPhone.

Tap “Settings”. Then double-tap “Settings”.

Tap “General”. Then double-tap “General”.

Use your finger on the screen to scroll to Accessibility.

Tap “Accessibility”. Then double-tap “Accessibility”.

Tap “VoiceOver”. Then double-tap “VoiceOver”.

VoiceOver is on.

Use three fingers on the screen to scroll to Braille.

Tap “Braille”.

The Braille display Bluetooth name will appear in the list of Braille devices. Its name will begin with TSM in the list of discovered devices.

Single-tap the device name to select it, double-tap the device name to initiate the pairing.

You will be taken to a passcode entry screen, enter the passcode 0000.

6.2 Using VoiceOver on a Mac OS X computer

Do not connect the USB cable with your computer (use the USB cable and power adapter for charging the Mini).
Turn on the Mini and open the Mini Bluetooth following the steps in section 2.5.
Launch VoiceOver Utility
Click on the "Braille" tab on the left.
Click on the "Displays" tab.
The Braille display Bluetooth name will appear in the list of Braille devices. Its name will begin with TSM in the list of devices.
Click the device name to select it, and initiate the pairing.
You will be taken to a passcode entry screen, enter the passcode 0000.

6.3 Navigation keys and commands

Note: When using a Braille display with VoiceOver using iOS 6 or later, you can use the following key commands to navigate.

Common Braille Commands for VoiceOver Navigation:

VoiceOver Action	Braille Command (chord)
Move to previous item	1 + Space
Move to next item	4 + Space
Move to previous item using rotor setting	3 + Space
Move to next item using rotor setting	6 + Space
Select previous rotor setting	2-3 + Space
Select next rotor setting	5-6 + Space
Move to the first element	1-2-3 + Space
Move to the last element	4-5-6 + Space
Read page starting at selected item	1-2-3-5 + Space
Read page starting at the top	2-4-5-6 + Space
Activates the Home button	1-2-5 + Space
Goes to the Status bar	2-3-4 + Space
Activates the Volume Up button	3-4-5 + Space
Activates the Volume Down button	1-2-6 + Space

Activates a Back button if present	1-2 + Space
Activates the Eject key	3-4 + Space
Activates the Delete key	7 + Space
Activates the Delete key	1-4-5 + Space
Activates the Return (Enter) key	8 + Space
Activates the Return (Enter) key	1-5 + Space
Activates the Tab key	2-3-4-5 + Space
Toggle Screen Curtain on and off	1-2-3-4-5-6 + Space
Pause or Continue speech	1-2-3-4 + Space
Toggle speech on and off	1-3- 4 + Space
Scroll left one page	2-4-6 + Space
Scroll right one page	1-3-5 + Space
Deselect text	2-3-6 + Space
Select text	3-5-6 + Space
Pan Braille to the left	2 + Space
Pan Braille to the right	5 + Space
Toggle announcement history	1-3-4-5 + Space
Switch between contracted and uncontracted Braille	1-2-4-5 + Space

Device keys for VoiceOver navigation:

Voice actions	Braille device keys
Pan braille to the left	LB
Pan braille to the right	RB
Select item under your finger	LJ_Center
Move to previous item	LJ_Left
Move to next item	LJ_Right
Move to previous item using rotor setting	LJ_Up
Move to next item using rotor setting	LJ_Down
Select item under your finger	RJ_Center
Move to previous item	RJ_Left
Move to next item	RJ_Right
Move to previous item using rotor setting	RJ_Up
Move to next item using rotor setting	RJ_Down
Double tap the selected item	Router
Toggle expanded status description	Status Router